Please amend claims 1-11 as follows:

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1. **(Amended)** [Method] <u>A method</u> for computer-supported error analysis of <u>at least one of sensors [and/or] and actuators in a technical system [that is present in the], the error analysis being in a form of a statusfinite description that exhibits statuses of the technical system, <u>the method</u> using a computer[.] comprising the steps of:</u>

- a) <u>determining</u> [whereby] a status-finite description of the technical system [is determined] for [the] <u>an</u> error case [for] <u>of</u> an error of <u>at least one of</u> a sensor [and/or of] <u>and</u> an actuator <u>in the technical system;</u>
- b) <u>determining</u> [whereby] a first set of achievable statuses [is determined] for the technical system;
- c) <u>determining</u> [whereby] a second set of achievable statuses [is determined] for the [error-effected] technical system <u>having an error</u>;
- d) <u>forming</u> [whereby] a difference set [is formed] from the first set and the second set; <u>and</u>
- e) <u>determining</u> [whereby] result conditions [are determined] from the difference set, [these] <u>the result conditions</u> meeting prescribable conditions.

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2. (Amended) [Method] The method according to claim 1, [whereby] wherein method steps a) through f) are implemented for all possible errors of sensors and/or actuators [that] is the technical system [comprises].

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3. **(Amended)** [Method] The method according to claim 1 [or 2, whereby] wherein failure probabilities are allocated to the sensors and/or actuators; and [whereby] wherein the error analysis ensues taking the failure probabilities into consideration.

5 4. (Amended) [Method] The method according to claim 1, wherein [one of the claims 1 through 3, whereby] method steps b) and c) [ensues] ensue according to [the] a method of model checking.

5. **(Amended)** [Method] The method according to claim 1, wherein [one of the claims 1 through 4, whereby] a status-finite description of a process implemented by the technical system is [taken into consideration] included in the method.

- 6. **(Amended)** [Method] The method according to claim 1, wherein [one of the claims 1 through 5, whereby] the status-finite description is realized by a finite automat.
- 7. **(Amended)** [Method] The method according to claim 6, [whereby] wherein the status-finite is realized by a finite automat in [the] a form of a binary decision diagram [(BDD)].

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8. (Amended) A method for [Employment of the method according to one of the claims 1 through 7 in rapid prototyping of [the] a technical system[.] the system having at least one of sensors and actuators in a technical system, the prototyping being in a form of a status-finite description that exhibits statuses of the technical system, the method using a computer. comprising the steps of:

- determining a status-finite description of the technical system for an <u>a)</u> error case of an error of at least one of a sensor and an actuator in the technical system:
- determining a first set of achievable statuses for the technical <u>b)</u> system;
- determining a second set of achievable statuses for the technical <u>c)</u> system having an error;
- <u>d)</u> forming a difference set from the first set and the second set; and
- determining result conditions from the difference set, the result <u>e)</u> conditions effecting prototyping of the technical system.
- (Amended) A method for [Employment of the method according to 9. one of the claims 1 through 7 in the framework of error diagnosis of [the] a technical system[.], the system having at least one of sensors and actuators in a technical system, the error diagnosis being in a form of a status-finite description that exhibits statuses of the technical system, the method using a computer, comprising the steps of:
- determining a status-finite description of the technical system for an <u>a)</u> error case of an error of at least one of a sensor and an actuator in the technical system;

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- b) determining a first set of achievable statuses for the technical system;
- c) determining a second set of achievable statuses for the technical system having an error:
- d) forming a difference set from the first set and the second set; and
- e) determining result conditions from the difference set, the result conditions effecting error diagnosis of the technical system.
- 10. **(Amended)** A method Employment of the method according to one of the claims 1 through 7] for generating critical test cases for a commissioning and a system test of [the] a technical system[.], the system having at least one of sensors and actuators in a technical system, the generating being in a form of a status-finite description that exhibits statuses of the technical system, the method using a computer, comprising the steps of:
- determining a status-finite description of the technical system for an error case of an error of at least one of a sensor and an actuator in the technical system:
 - b) determining a first set of achievable statuses for the technical system:
- 20 <u>c)</u> <u>determining a second set of achievable statuses for the technical system having an error;</u>
 - d) forming a difference set from the first set and the second set; and
 - e) determining result conditions from the difference set, the result conditions effecting the generation of critical test cases.

(Amended) A method [Employment of the method according to one of the claims 1 through 7] for preventive maintenance of [the] a technical system[.], the system having\at least one of sensors and actuators in a technical system, the method being in a form of a status-finite description that exhibits statuses of the technical system, the method using a computer, comprising the steps of: determining a status-finite description of the technical system for an <u>a)</u> error case of an error of at least one of a sensor and an actuator in the technical system; determining a first set of achievable statuses for the technical 10 <u>b)</u> system: determining a second set of achievable statuses for the technical <u>c)</u> system having an error: forming a difference set from the first set and the second set; and <u>d)</u> Ü determining result conditions from the difference set, the result 15 e) ij conditions effecting the preventive maintenance.

IN THE ABSTRACT

11.

On page 18, please delete lines 1-3, and insert the following --ABSTRACT OF THE DISCLOSURE--. heading: